Fluspirilene

Cat. No.: HY-B1655

CAS No.: 1841-19-6

Molecular Formula: $C_{29}H_{31}F_2N_3O$

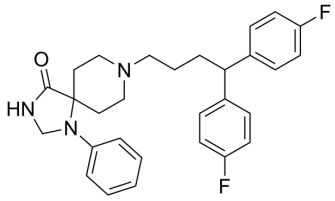
Molecular Weight: 475.57

Target: Calcium Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (52.57 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1027 mL	10.5137 mL	21.0274 mL
	5 mM	0.4205 mL	2.1027 mL	4.2055 mL
	10 mM	0.2103 mL	1.0514 mL	2.1027 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.26 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.26 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Fluspirilene is a non-competitive antagonist of L-type calcium channels with an IC_{50} of 0.03 μM. Fluspirileneis a long-acting injectable depot antipsychotic agent used for schizophrenia.

IC_{50} & Target

L-type calcium channel

In Vitro

Fluspirilene, at concentrations which non-competitively modify dihydropyridine binding, selectively antagonizes the effects of calcium-channel activators[1]. Fluspirilene decreases the viability and suppresses sphere-forming of glioma stem cell lines in a dose-dependent manner. Fluspirilene demonstrates the inhibition of proliferation of T98, U87 and all GSC lines at 1.25, 2.5, and 5 μM, while it inhibits the proliferation of U251 and SNB19 at 2.5 and 5 μM[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	Mice treated with Fluspirilene (HY-B1655) shows a remarkable reduction of the tumor size. Fluspirilene significantly prolongs survival of the TGS04 mouse model[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [2]	To investigate the effect of fluspirilene on cell proliferation, cells are treated with 1.25, 2.5, and 5 μM of fluspirilene. GSC viability is assessed using a Cell Counting Kit-8[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [2]	Mice[2] The mice are randomly assigned to two groups and treated with either fluspirilene (n=5) or with DMSO as a control group (n=5). All mice are given intramuscular injections of 200 μL of DMSO or fluspirilene dissolved in DMSO at 1 mg/kg body weight four times[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kenny BA, et al. Selective antagonism of calcium channel activators by fluspirilene. Br J Pharmacol. 1990 Jun;100(2):211-6.

[2]. Dong Y, et al. Identification of antipsychotic drug fluspirilene as a potential anti-glioma stem cell drug. Oncotarget. 2017 Dec 4;8(67):111728-111741.

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